

LRB SCHEME OF WORK FOR KS3 COHORT 2022-2023

Theme		Heritage Heroes	Heritage Heroes	Vile and Victorious Vict	Vile and Victorious Victoria	Gods and Monsters	Gods and Monsters
Science and Technology	Science	<p>Earth and atmosphere - CHEMISTRY - As students are studying the theme 'Heritage Heroes' they will begin by looking at the composition and structure of the Earth. Students will then study the rock cycle and will explain the differences between sedimentary, igneous and Metamorphic rocks. CHEMISTRY - The particulate nature of matter- Students will recognise the properties of the different states of matter (solid, liquid and gas) in terms of the particle model and will demonstrate this through drawings.</p>	<p>FOOD CHAINS/HABITATS- Students will learn about the life processes carried out by all living organisms, how these organisms are classified into groups and to observe how these organisms fit into that group by researching their main criteria. There will also be opportunity to use effective research skills to look at adaptations of organisms in different environments and the factors that affect their survival. Students will look at habitats and will recognise a variety of habitats independently. Students will look at their local environments and link relevant wildlife and fauna that live there.</p>	<p>VICTORIAN SCIENTISTS - BIOLOGY – HEALTH AND ORGANISMS - In the first half of Queen Victoria's reign, death from diseases such as cholera, tuberculosis and influenza was common. Many babies died before their first birthday. Victorians such as Louis Pasteur and Dr John Snow helped to improve public health. What can we find out about them? Can we design a poster to persuade people that hand washing helps to prevent diseases spreading? Students will learn about the inside of the human body and investigate specialised cells, tissue, organs and organ systems. Safety is looked at when introducing students to the science lab and when carrying out practicals ie. microscope work.</p>	<p>VICTORIAN INVENTIONS ELECTRICITY- PHYSICS - ELECTRICAL CIRCUITS - In Victorian times, electric lights started to replace candles, gas lights and oil lamps. Joseph Swan and Thomas Edison each developed successful electric light bulbs. In 1883, they formed the Edison & Swan United Electric Light Company. Can we build a circuit to light a bulb? Where does the light come from? How can we use our circuit in a model, eg in a lighthouse?</p> <p>PHYSICS – MAGNETS - Wealthy Victorians enjoyed playing indoor parlour games together, such as charades and blind man's buff. Magnetic fishing was a popular game, where miniature fishing rods with magnets were used to catch paper fish that have a magnetic part. How can we find out if all of our magnets are the same strength? Can we make a magnetic fishing game that is fair to play?</p>	<p>The Ancient Greeks made many advancements in science and technology. Greek philosophers began to look at the world in different ways. They came up with theories on how the world worked and thought that the natural world obeyed certain laws that could be observed and learned through study.</p> <p>Astronomy</p> <p>The Greeks applied their skills in math to help describe the stars and the planets. They theorized that the Earth may orbit the Sun and came up with a fairly accurate estimate for the circumference of the Earth. They even developed a device for calculating the movements of the planets which is sometimes considered the first computer</p>	<p>Medicine</p> <p>The Greeks were one of the first civilizations to study medicine as a scientific way to cure illnesses and disease. They had doctors who studied sick people, observed their symptoms, and then came up with some practical treatments. The most famous Greek doctor was Hippocrates. Hippocrates taught that diseases had natural causes and they could sometimes be cured by natural means. The Hippocratic Oath to uphold medical ethics is still taken by many medical students today.</p> <p>Biology</p> <p>The Greeks loved to study the world around them and this included living organisms. Aristotle studied animals in great detail and wrote down his observations in a book called the History of Animals. He heavily influenced zoologists for years by classifying animals according to their different characteristics. Later Greek scientists continued Aristotle's work by studying and classifying plants.</p>

<p>Design Technology</p>	<p>HERITAGE HEROES- THEATRE BOX- Students will plan and create a shadow puppet theatre based on Welsh Legends. Students will explore a variety of Welsh legends and then choose one to dramatise through puppetry. Students need to think about scale and depth in order to create effective shadows and will have to be able to move their puppets effectively.</p>	<p>DRAGONS DEN- Looking at the Great Exhibition in Victorian times students will learn about a variety of key inventions that derived from this time. Students will create and design their own invention and will take part in a 'Dragon's Den' event to sell their their product. Idea: Decide on what your invention is. Design: Create a diagram/drawing of your invention. Advertise: Create an advertising poster to sell your invention. Persuade: Write a letter to Dragons' Den to persuade them to invest in your invention.</p>	<p>VICTORIAN TOYS - Students will explore the toys that Victorian children played with and complete their own version of one of the toys i.e, peg doll, spinning top, Thaumotrope. Students will need to think about playability and aesthetics.</p>	<p>GREEK INVENTIONS - While the Greeks loved to observe and study the world, they also applied their learning to make some practical inventions. Students will look at some of the inventions that are typically attributed to the Ancient Greeks and explore how there designs solved problems. Watermill - A mill for grinding grain that is powered by water. The Greeks invented the waterwheel used to power the mill and the toothed gears used to transfer the power to the mill. Alarm Clock - The Greek philosopher Plato may have invented the first alarm clock in history. He used a water clock to trigger a sound like an organ at a certain time. Central Heating - The Greeks invented a type of central heating where they would transfer hot air from fires to empty spaces under the floors of temples. Crane - The Greeks invented the crane to help lift heavy items such as blocks for constructing buildings. Archimedes' Screw - Invented by Archimedes, the Archimedes' screw was an efficient way to move water up a hill.</p>	<p>SOLVING A PROBLEM - Influenced by the inventions from Ancient Greece students will design an invention that solves a problem. Students will need to justify their designs and create a mock up of their product to show to the class. Students will develop their design skills through technical designs and will use their making/cutting skills to create mini products.</p>
<p>Information</p>					

	Technology	<p>COMPUTER SAFETY - Students will research and develop knowledge of computer safety including the safe use of social media, impacts of cyberbullying, malware and viruses. Students will create a presentation meeting the target audience and purpose to display understanding. Students will develop their ICT skills on Fridays by accessing IDEA.ORG Students will have accounts for IDEA.ORG and will work on these units every Friday Week one.</p>	<p>This unit is designed to build upon students' experience in key stage 2. It requires students to use a range of different skills across several pieces of software. Learners will work between different applications to create a poster and slides on a given theme. The unit is designed so that students can concentrate on applying skills that they may have previously learnt as well as those learnt in the unit. Learners are given clear tasks for which they need to first plan and then implement a solution. Students will learn to log into Microsoft Office, Open and send emails, create a</p>		<p>STOP MOTION - Students will learn how to create a stop motion animation, they will apply this knowledge to create their own stop motion piece based on their own storyboard. This make some good cross-curricular links with art and computing.</p>	<p>WAKELET - Students will exploring creative ways technology can enhance learning around Ancient Greece. Students will look at using the tool Wakelet to collect useful online resources that will help children build their knowledge around the Ancient Greeks.</p>	<p>GREEK GODS TOP TRUMPS- Students will use a variety of apps to learn about Ancient Greek Gods, they will bring them to life and interview them before embedding the videos to create their own Top Trump cards.</p>
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